

# NINDS Notes

National Institute of Neurological Disorders and Stroke

U.S. Department of Health and Human Services

National Institutes of Health



March 2006

## Contents

### Article on:

- Research Results from Genetic Analysis of Neurologically Healthy People..... 2

### Program Announcements (Grant Applications) Sought on:

- Academic Research Enhancement Awards ..... 3
- Bioengineering Nanotechnology Initiative..... 4
- Cognitive Sequelae of Parkinson's Disease ..... 5
- Development of PET and SPECT Ligands for Brain Imaging ..... 6
- Genetic and Genomic Analyses of Xenopus ..... 7
- High-Throughput Tools for Brain and Behavior ..... 8
- Manufacturing Processes of Medical, Dental, and Biological Technologies ..... 9
- Mentored Quantitative Research Development Award..... 10
- Mentored Research Scientist Development Award ..... 11
- Morris K. Udall Parkinson's Disease Centers of Excellence ..... 12
- New Technology for Proteomics and Glycomics..... 13
- NIH Pathway to Independence (PI) Awards..... 14
- NIH Support for Conferences and Scientific Meetings..... 15
- NINDS Cooperative Small Business Awards in Translational Research..... 16
- Novel Technologies for In Vivo Imaging..... 17
- Preapplications for Interdisciplinary Research Consortium..... 18
- Probes for Microimaging the Nervous System..... 19
- Research to Improve the Chemistry and Targeted Delivery of RNAi Molecules .... 20
- Sarcoidosis ..... 21
- Structural Biology of Membrane Proteins..... 22
- Translational Research in Muscular Dystrophy..... 23-24

### Request for Applications Sought on:

- Autism Centers of Excellence ..... 25
- Countermeasures Against Chemical Threats (CounterACT)..... 26-28
- Diagnostic Technologies for Chemical Threat Exposure..... 29
- Interdisciplinary Research Consortium ..... 30
- Nanomedicine Development Centers ..... 31
- Pilot-Scale Libraries for High-Throughput Screening..... 32

### Volunteers Needed for a Study on:

- Tourette Syndrome..... 33

## **NINDS, NIA Announce Research Results from Genetic Analysis of Neurologically Healthy People**

Scientists in the Laboratory of Neurogenetics at the National Institute on Aging (NIA)—in collaboration with the National Institute of Neurological Disorders and Stroke (NINDS), and the Coriell Institute for Medical Research (CIMR)—recently produced a new valuable genetic resource, the first-ever genetic sequencing of people who are neurologically normal.

In genetic studies, people with a disorder (“cases”) are often compared to people who do not have the disorder (“controls”). However, individuals who serve as controls are not always evaluated for the disorder, nor for other neurological problems. This new genetic resource is important in that it characterizes the genetic makeup of a large group of people who have already been found to have healthy brains.

Production of this control data is the first part of a larger study to generate whole genetic data on individuals with Parkinson’s disease and stroke, and on normal individuals with no neurological disorders. This control group will serve as an important comparison to allow gene discovery in neurological disorders. It is the first study of its kind in well-characterized subjects.

In the study, investigators completed a whole genetic sequence on 276 North American Caucasian neurologically normal controls—those without neurological disease and with no family history of neurological disease in any first-degree relative.

The first set of genotyping data is now publicly available, along with detailed clinical data from the NINDS-funded Neurogenetics Repository at CIMR. Clinical data are also available for all subjects and include a detailed medical and family history and, in most cases, a neurological examination and a normal Folstein Mini-Mental Status examination score (a test for dementia). (None of the subjects has a history of neurological illness, or a family history suggestive of a Mendelian pattern of neurological disorder inheritance.)

All samples—which are roughly 50 percent male and 50 percent females, with an age range of 55 to 88 years—are available, and were specifically designed to act as controls for the study of the genetics of late-onset neurological disorders.

There is no restriction on the use of this clinical or genotyping data by researchers other than that the data must not be used to identify any subject, and all publications arising from this work must acknowledge the NINDS-funded Neurogenetics Repository and the NIA Laboratory of Neurogenetics.

For more information, researchers should contact Dr. Katrina Gwinn-Hardy, Program Director, Neurogenetics Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2143, Bethesda, MD 20892; telephone: 301-496-5745; fax: 301-402-1501; e-mail: [gwinnk@ninds.nih.gov](mailto:gwinnk@ninds.nih.gov), or visit the NINDS Neurogenetics Repository website at <http://locus.umdnl.edu/ninds>.

(end)

## **Academic Research Enhancement Awards Application Encouraged**

The National Institute of Neurological Disorders and Stroke (NINDS) encourages applications for academic research enhancement awards. This announcement is made together with 21 other components of the National Institutes of Health (NIH).\*

The purpose of the academic research enhancement award (AREA) is to stimulate research at educational institutions that provide baccalaureate or advanced degrees for research scientists, but have not been major recipients of NIH support. AREA grants create opportunities for scientists and institutions, otherwise unlikely to participate in NIH programs, to contribute to the Nation's biomedical and behavioral research effort. The grants support small-scale health-related research projects proposed by faculty members of eligible institutions.

In the AREA program, investigators benefit from the opportunity to conduct independent research, the grantee institution benefits from a research environment strengthened through AREA grants and furthered by participation in NIH's diverse extramural programs, and the students benefit from participating in biomedical and behavioral science research.

For more information, potential applicants should contact Dr. Randall Stewart, Program Director, Technology Development Group, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2135, Bethesda, MD 20892; telephone: 301-496-1917; fax: 301-402-1501; e-mail: [rs416y@nih.gov](mailto:rs416y@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-042.html>.

## **Applications Sought for Research on Bioengineering Nanotechnology**

The National Institute of Neurological Disorders and Stroke (NINDS) encourages small business innovation research (SBIR) and small business technology transfer (STTR) applications for projects to develop and apply nanotechnology to biomedicine. This announcement is made together with 18 other components of the National Institutes of Health (NIH).\*

Nanotechnology is the creation of functional materials, devices, and systems through control of matter at the scale of 1 to 100 nanometers, and the exploitation of novel properties and phenomena at the same scale. Nanotechnology is emerging as a field critical for enabling essential breakthroughs that may have tremendous potential for affecting biomedicine.

Areas of research interest include, but are not limited to: nanomaterials (enabling)—development of synthetic nanoscale building blocks for the formulation of bottom-up approaches to complex and multi-functional nanomaterials; nano-bio interfaces—science of controlling the interface between biomolecular systems and nanoscale synthetic materials, which involves the ability to control the interface architecture and transduction of the control signal through this interface; nanoimaging—real-time imaging of subcellular structure, function, properties, and metabolism; cell biology—nano-scale research on cellular processes, including biophysics of molecular assemblies, membranes, organelles, and macromolecules; molecular and cellular sensing/signaling—technologies to detect biological signals and single molecules within and outside cells; and prosthetics—mechanical, chemical, and cellular implant nano-technologies to achieve functional replacement tissue architectures and tissue-compatible devices.

For more information, potential applicants should contact Dr. Joseph Pancrazio, Program Director, Repair and Plasticity Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2005, Bethesda, MD 20892; telephone: 301-496-1447; fax: 301-480-1080; e-mail: [jp439m@nih.gov](mailto:jp439m@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:

<http://grants.nih.gov/grants/guide/pa-files/PA-06-009.html> (SBIR) or  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-008.html> (STTR).

## **Applications Sought for Research on the Cognitive Sequelae of Parkinson's Disease**

The National Institute of Neurological Disorders and Stroke (NINDS), the National Institute on Aging (NIA), and the National Institute of Nursing Research (NINR) invite grant applications for research on the cognitive sequelae of Parkinson's disease (PD). This announcement is supported by 3 grant funding mechanisms: R01, R03, and R21.\*

PD is commonly viewed as a movement disorder. However, it is more than a movement disease; it also affects thinking, reasoning, learning, processing speed, and other cognitive abilities. The cognitive changes seen in people with PD are less understood and studied than parkinsonian movement symptoms.

Areas of research interest include, but are not limited to: basic molecular or cellular studies of potential drugs or other treatments that could address cognitive impairments in PD; behavioral and physiological characterization of models based on the new molecular understanding of synuclein, parkin, and other proteins involved in the pathogenic processes of neurodegenerative disorders; the neurobiological basis of cognitive impairments in PD; the association between clinical disease onset, neuropathology in PD, and the development and severity of cognitive impairments; best outcome measures in PD patients with cognitive impairments, or co-morbid with dementia, depression, or other non-motor manifestations, including development and validation of specific assessment tools for PD patients with cognitive impairment; the relationship between age of onset of PD and PD-related cognitive changes; neuroanatomical circuits and neurochemical processes mediating cognitive states and cognition-based individual differences in PD; and the specific consequences of deep brain stimulation or other surgical interventions on the cognitive aspects of PD.

For more information, potential applicants should contact Dr. Debra Babcock, Program Director, Systems and Cognitive Neuroscience Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2108, Bethesda, MD 20892; telephone: 301-496-9964; fax: 301-402-2060; e-mail: [db390r@nih.gov](mailto:db390r@nih.gov); or Dr. Diane Murphy, Program Director, Neurodegeneration Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2222, Bethesda, MD 20892; telephone: 301-496-5680; fax: 301-480-1080; e-mail: [dm152o@nih.gov](mailto:dm152o@nih.gov).

(end)

---

\*For a more detailed description of this announcement, please visit: <http://grants.nih.gov/grants/guide/pa-files/PA-06-105.html> (R01); <http://grants.nih.gov/grants/guide/pa-files/PA-06-106.html> (R03); or <http://grants.nih.gov/grants/guide/pa-files/PA-06-107.html> (R21).

## **Applications to Develop PET and SPECT Ligands for Brain Imaging Sought**

The National Institute of Neurological Disorders and Stroke (NINDS) encourages small business innovation research (SBIR) and small business technology transfer (STTR) applications to develop positron emission tomography (PET) and single-photon emission computed tomography (SPECT) ligands for brain imaging. This announcement is made together with 4 other components of the National Institutes of Health (NIH).\*

Tremendous opportunities exist for using PET and SPECT imaging to study the pathophysiology and treatment of brain disorders, but relatively few radioligands are currently available for functional imaging of target molecules implicated in normal brain function and in brain and behavioral disorders. This initiative is intended to stimulate the development of radioligands for molecular targets that are of broad interest to the scientific community.

Topics of interest include, but are not limited to: lead compound identification/development and syntheses of chemicals with suitable binding affinity, biodistribution, pharmacokinetics, and physio-chemical properties allowing radiochemical synthesis; model development for quantitation, including development and evaluation of pharmacokinetic models and use of animal models of gradient of binding sites/enzymes to assess sensitivity to changes; investigational new drug (IND) application development and submission to the Food and Drug Administration (FDA) prior to pilot human studies; pilot human imaging studies with normal controls, pharmacological challenges with analyses of radiometabolites under the auspices of institutional review board (IRB) approval; and clinical studies in patient/disease population or experimental manipulations.

For more information, potential applicants should contact Dr. Daofen Chen, Program Director, Systems and Cognitive Neuroscience Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2131, Bethesda, MD 20892; telephone: 301-496-1917; fax: 301-402-1501; e-mail: [dc342b@nih.gov](mailto:dc342b@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:

<http://grants.nih.gov/grants/guide/pa-files/PA-06-017.html> (SBIR) or <http://grants.nih.gov/grants/guide/pa-files/PA-06-018.html> (STTR).

## **Research Sought on Genetic and Genomic Analyses of Xenopus**

The National Institute of Neurological Disorders and Stroke (NINDS) encourages grant applications for research on genetic and genomic analyses of *Xenopus*. This announcement is made together with 9 other components of the National Institutes of Health (NIH).\*

The purpose of this announcement is to encourage researchers to use the newly generated methodologies and reagents, such as the clones and sequence information, to identify and characterize genes, gene families, and gene networks that control developmental and cellular events, and to generate research tools and perform pilot studies. Additionally, this announcement invites scientists to devise and improve techniques to alter gene expression, and to control the spatial and temporal pattern of gene expression.

Examples of research projects include, but are not limited to: development and/or application of novel methods of mutagenesis and novel screens for mutants; development and/or use of techniques supporting more efficient targeting of induced local lesions in genomes (TILLING); development and/or use of technologies for gene inactivation and gene expression manipulation; and development of high-throughput small molecule screens, new genetic or genomic resources that are of high priority for the *Xenopus* community, and screens focusing on identifying novel developmental genes and pathways.

**LETTERS OF INTENT RECEIPT DATE: December 19, 2006.**

**APPLICATION RECEIPT DATE: January 18, 2007.**

For more information, potential applicants should contact Dr. Steven Klein, Developmental Biology, Genetics and Teratology Branch, National Institute of Child Health and Human Development (NICHD), Room 4B01, 6100 Executive Boulevard, Bethesda, MD 20892; telephone: 301-435-6886; e-mail: [kleins@mail.nih.gov](mailto:kleins@mail.nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:  
<http://grants.nih.gov/grants/guide/pa-files/PAR-05-166.html>.



## **Applications Encouraged to Develop High-Throughput Tools for Brain and Behavior**

The National Institute of Neurological Disorders and Stroke (NINDS) and the National Institute of Mental Health (NIMH) encourage small business innovation research (SBIR) and small business technology transfer (STTR) applications to develop high-throughput tools for brain and behavior.\*

Many of the common technologies used in neuroscience and behavioral science research require extensive time, labor, and cost for acquiring and analyzing data. Therefore, there is a strong need to develop technologies that can make data collection and analysis more efficient, without compromising competency.

Applications considered responsive to this announcement include those proposing research and development of tools for high-throughput measures at any level (or combination of levels) of analysis—from molecules through behavior, including social behavior. The tools should be aimed at rapid acquisition and analysis of data useful to understanding the brain and behavior. While the range of tools appropriate for this announcement is wide, responsive applications must propose research and development of tools that would significantly improve the ability to rapidly acquire and analyze the collected data.

For more information, potential applicants should contact Dr. Debra Babcock, Program Director, Systems and Cognitive Neuroscience Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2108, Bethesda, MD 20892; telephone: 301-496-9964; fax: 301-402-2060; e-mail: [db390r@nih.gov](mailto:db390r@nih.gov).

(end)

---

\*For a more detailed description of this announcement, please visit the NIH web site at: <http://grants.nih.gov/grants/guide/pa-files/PA-06-023.html> (SBIR) or <http://grants.nih.gov/grants/guide/pa-files/PA-06-024.html> (STTR).



## **Applications Sought for Manufacturing Processes of Medical, Dental, and Biological Technologies**

The National Institute of Neurological Disorders and Stroke (NINDS) encourages small business innovation research (SBIR) and small business technology transfer (STTR) applications for research on manufacturing processes of medical, dental, and biological technologies. This announcement is made together with 28 other components of the National Institutes of Health (NIH), the Food and Drug Administration (FDA), and the Centers for Disease Control and Prevention (CDC).\*

The purpose of this announcement is to encourage research on advanced manufacturing processes of biomedical products and the implementation of new technologies in medical care. New methods, procedures, measures, and controls are needed for manufacturing a broad range of technologies and products with unsurpassed quality, and to lower manufacturing costs for existing and new processes.

Examples of research topics of interest include, but are not limited to: flexible computer-assisted integrated manufacturing equipment and intelligent processing equipment adaptable to the varied needs of biomedical research and medical care device and material production; technology for manufacturing clinical diagnostic devices and reagents, and novel diagnostic imaging devices for both invasive and non-invasive techniques; technology for producing and isolating biotechnology products, such as proteins, antibodies, nucleic acids, vaccines, and vectors for genetic engineering and gene therapy; rapid prototyping and manufacturing technology suitable for remote site and on-demand production processes; technology to promote the recovery, reuse, and remanufacture (recycling) of medical materials and equipment; technology for manufacturing biomedically specialized computational and information technology equipment and software; and development of innovative products that facilitate the safety and health training of hazardous materials workers, emergency responders, and skilled support personnel.

For more information, potential applicants should contact Dr. Randall Stewart, Program Director, Technology Development Group, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2135, Bethesda, MD 20892; telephone: 301-496-1917; fax: 301-402-1501; e-mail: [rs416y@nih.gov](mailto:rs416y@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:

<http://grants.nih.gov/grants/guide/pa-files/PA-06-013.html> (SBIR) or  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-012.html> (STTR).

## **Mentored Quantitative Research Development Award Applications Encouraged**

The National Institute of Neurological Disorders and Stroke (NINDS) encourages applications for mentored quantitative research development awards. This announcement is made together with 17 other components of the National Institutes of Health (NIH).\*

A particular area of research is often invigorated by novel perspectives that may be provided by individuals trained outside that research arena. The purpose of this award is to attract to NIH-relevant research those investigators whose quantitative science and engineering research thus far has not been focused primarily on health and disease.

The award supports the career development of quantitatively trained investigators who make a commitment to basic or clinical biomedicine, bioengineering, bioimaging, or behavioral research relevant to the NIH mission. The NIH is especially interested in increasing the number of scientists trained to conduct high-quality research that combines insights derived from, and that cuts across, different scientific, technical, and biomedical areas. Examples of quantitative scientific and technical backgrounds considered appropriate for this award include, but are not limited to: mathematics, statistics, economics, computer science, imaging science, informatics, physics, chemistry, and engineering.

For more information, potential applicants should contact Dr. Stephen Korn, Director, Training and Career Development, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2186, Bethesda, MD 20892; telephone: 301-496-4188; fax: 301-594-5929; e-mail: [NINDStrainingoffice@ninds.nih.gov](mailto:NINDStrainingoffice@ninds.nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-087.html>.

## **Mentored Research Scientist Development Award Applications Encouraged**

The National Institute of Neurological Disorders and Stroke (NINDS) encourages applications for mentored research scientist development awards. This announcement is made together with 17 other components of the National Institutes of Health (NIH).\*

The goal of NIH-supported career development programs is to help ensure that diverse pools of highly trained scientists are available in adequate numbers and in appropriate research areas to address the Nation's biomedical, behavioral, and clinical research needs.

The mentored research scientist development award (K01) provides support for a sustained period of “protected time” for intensive research career development—under the guidance of an experienced mentor, or sponsor, in the biomedical, behavioral, or clinical sciences—leading to research independence. The expectation is that through this sustained period of research career development and training, awardees will launch independent research careers and become competitive for new research project grant (R01) funding.

For more information, potential applicants should contact Dr. Stephen Korn, Director, Training and Career Development, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2186, Bethesda, MD 20892; telephone: 301-496-4188; fax: 301-594-5929; e-mail: [NINDStrainingoffice@ninds.nih.gov](mailto:NINDStrainingoffice@ninds.nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-001.html>.

## **Applications for Parkinson's Disease Centers of Excellence Encouraged**

The National Institute of Neurological Disorders and Stroke (NINDS) invites applications for the Morris K. Udall Parkinson's Disease Centers of Excellence Program.\*

Morris K. Udall Parkinson's Disease Research Centers contribute to the basic understanding of the pathology of Parkinson's disease (PD). Each center contains basic, translational, or clinical research, or proportions of each that are appropriate for the research objectives. Research objectives emphasize basic, translational, or clinical studies of PD, parkinsonisms, and related disorders. Emphasis is placed on multidisciplinary and collaborative studies that are carried out best in a center setting.

Areas of interest include, but are not limited to: development of therapeutics for treating PD, including pharmacological, gene therapy, cell replacement, or surgical approaches; studies to address the non-motor aspects of PD, including dementia, depression, psychosis, cognitive impairment, etc., including development of animal models which recapitulate non-motor aspects of PD; the natural history of PD and related disorders including prospective clinical assessment, neuropathological analysis, and banking of brain tissue from individuals with PD who agree to participate in an autopsy program; genetic, molecular, and cell biological studies of the structure, function, composition, role, and possible interrelationship of cellular proteins and inclusion bodies implicated in the pathogenesis of PD and related disorders; development of biomarkers for PD onset, progression, or response to therapeutics; cellular and molecular mechanisms of cell injury and death in PD and related neurodegenerative disorders; development of animal models and their use for investigation of pathophysiology and efficacy of therapeutic intervention; and development and function of the neural circuitry involved in PD and related disorders

For more information, potential applicants should contact Dr. Diane Murphy, Program Director, Neurodegeneration Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2222, Bethesda, MD 20892; telephone: 301-496-5680; fax: 301-480-1080; e-mail: [dm152o@nih.gov](mailto:dm152o@nih.gov).

(end)

---

\*For a more detailed description of this announcement, please visit: <http://grants.nih.gov/grants/guide/pa-files/PAR-06-058.html>.

## **Applications Sought to Develop New Technology for Proteomics and Glycomics**

The National Institute of Neurological Disorders and Stroke (NINDS) invites small business innovation research (SBIR) and small business technology transfer (STTR) applications to develop new technology for proteomics and glycomics. This announcement is made together with 3 other components of the National Institutes of Health (NIH).\*

Proteomics is a rapidly expanding field. Proteomic technologies and methods remain largely inadequate, particularly with respect to quantitative and real-time measurements. Novel approaches and tools are needed to address the technical challenges in proteomics, and the special challenges of glycobiology-focused proteomics, or glycomics.

This announcement encourages grant applications from small businesses to develop broadly applicable research tools that address the core technical challenges in proteomics and glycomics including, but not limited to: robotics, sample preparation and pre-fractionation, analytical separations, gel and array imaging, quantitation, mass spectrometry, intelligent automated data acquisition, and improved informatics technologies. One area of particular interest is the development of technologies that will permit quantitative and real-time observations, for either clinical studies or experimental systems.

For more information, potential applicants should contact Dr. Danilo Tagle, Program Director, Neurogenetics Group, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2133, Bethesda, MD 20892; telephone: 301-496-5745; fax: 301-402-1501; e-mail: [dt39y@nih.gov](mailto:dt39y@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:

<http://grants.nih.gov/grants/guide/pa-files/PA-06-128.html> (SBIR) or  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-129.html> (STTR).

## **NIH Pathway to Independence Award Applications Sought**

The National Institute of Neurological Disorders and Stroke (NINDS) invites applications for National Institutes of Health (NIH) pathway to independence (PI) awards. This announcement is made together with 23 other components of the NIH. \*

One of the most challenging transitions in any research career is that from postdoctoral trainee to independent scientist. NIH data indicate that the average age of first-time (new) principal investigators obtaining R01 research funding from the NIH has risen to 42 years for Ph.D. degree holders and 44 years for M.D. and M.D./Ph.D. degree holders. This trend must be curtailed in order to capture the creativity and innovation of new independent investigators in their early career stages to address the Nation's biomedical, behavioral, and clinical research needs. The primary goal of this initiative is to help researchers receive an R01 award earlier in their careers and to assist them in securing stable research positions during the critical transition stages of their careers.

The NIH PI award will provide up to 5 years of support consisting of 2 phases. The initial mentored phase will provide support for salary and research expenses for up to 2 years for the most promising and exceptionally talented new investigators who have no more than 5 years of postdoctoral research training experience at the time of initial application or subsequent resubmission(s). This initial phase of mentored support will allow the candidate time to complete research, publish results, and bridge to an independent research position. As part of the application, the candidate must propose a research project that he/she will also pursue as an independent investigator during the second phase of the award. Following the mentored phase, the individual may request up to 3 years of support to transition—as an independent scientist—to an extramural sponsoring institution/organization to which the individual has been recruited. This support will allow the individual to continue to work toward establishing his/her own independent research program and to prepare an application for regular research grant support (R01).

For more information, potential applicants should contact Dr. Stephen Korn, Director, Training and Career Development, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2186, Bethesda, MD 20892; telephone: 301-496-4188; fax: 301-594-5929; e-mail: [NINDStrainingoffice@ninds.nih.gov](mailto:NINDStrainingoffice@ninds.nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-133.html>.

## **Applications for NIH Support for Conferences and Scientific Meetings Encouraged**

The National Institute of Neurological Disorders and Stroke (NINDS) encourages applications for NIH support for conferences and scientific meetings. This announcement is made together with 25 other components of the National Institutes of Health (NIH).\*

The NIH recognizes the value of supporting high-quality conferences and scientific meetings that are relevant to its scientific mission and public health. A conference or scientific meeting is defined as a gathering, symposium, seminar, workshop, or any other organized, formal meeting where persons assemble to coordinate, exchange, and disseminate information or to explore or clarify a defined subject, problem, or area of knowledge.

Eligible organizations include: for-profit organizations; non-profit organizations; public or private institutions, such as universities, colleges, hospitals, and laboratories; units of state governments; units of local governments; eligible agencies of the federal government; domestic institutions and organizations; and faith-based or community-based organizations.

For more information, potential applicants should contact Dr. Alan Willard, Chief, Scientific Review Branch, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 3202, Bethesda, MD 20892; telephone: 301-496-9223; fax: 301-402-0182; e-mail: [aw135y@nih.gov](mailto:aw135y@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-041.html>.



## **Applications Sought for NINDS Cooperative Small Business Awards in Translational Research**

The National Institute of Neurological Disorders and Stroke (NINDS) invites small business innovative research (SBIR) applications for NINDS cooperative small business awards in translational research.\*

Translational research is the process of applying ideas, insights, and discoveries generated through basic scientific inquiry to the treatment or prevention of human disease.

Phase I award feasibility projects are intended to discover potential targets for therapeutic intervention; identify candidate therapeutics; develop assays, animal models, devices, or technologies for screening or developing therapeutics; or obtain preliminary data on the efficacy of candidate therapeutics. Such projects, if successful, should lead directly to a therapy development project for a particular neurological disorder.

Goals of phase 1 projects include, but are not limited to: identification of targets for therapeutic intervention; development of assays that permit the preliminary screening of candidate therapeutics; development of animal models that permit further evaluation of candidate therapeutics and/or toxicology studies; development of tools and technologies that can be directly used for therapy development; preliminary identification of candidate therapeutics that can be evaluated through further preclinical testing; and testing of therapeutics for efficacy in cell-based or animal models of a neurological disorder.

Phase II awards are cooperative agreements that support translational research projects focused on a single problem or approach in therapy development for a neurological disorder. The research focuses on a single neurological disorder or a group of closely related neurological disorders. Each research project should include a translational research focus and specific milestones of progress toward disease intervention.

For more information, potential applicants should contact Dr. Thomas Miller, Program Director, Technology Development Group, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2139, Bethesda, MD 20892; telephone: 301-496-1779; fax: 301-402-1501; e-mail: [tm208y@nih.gov](mailto:tm208y@nih.gov).

(end)

---

\*For a more detailed description of this announcement, please visit the NIH web site at: <http://grants.nih.gov/grants/guide/pa-files/PA-06-005.html>.

## Novel Technologies for In Vivo Imaging Sought

The National Institute of Neurological Disorders and Stroke (NINDS) encourages small business innovation research (SBIR) and small business technology transfer (STTR) applications to develop novel technologies for *in vivo* imaging. This announcement is made together with 3 other components of the National Institutes of Health (NIH).\*

Significant advances in medical imaging technologies have been made in the past 25 years in such areas as magnetic resonance imaging (MRI), computed tomography (CT), nuclear medicine, ultrasound, and optical imaging. These advances largely focused on structural or anatomical imaging at the organ or tissue level. Now there is an opportunity to develop and integrate novel imaging technologies that exploit current knowledge of the genetic and molecular bases of various diseases.

Topics of research interest include, but are not limited to: early disease detection; disease screening; imaging for diagnosis, staging, or monitoring the effects of therapy; image-guided biopsy (IGB), image-guided therapy (IGT), and image-guided interventional (IGI) procedures; and copies of prototype imaging systems.

For more information, potential applicants should contact Dr. Daofen Chen, Program Director, Systems and Cognitive Neuroscience Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2131, Bethesda, MD 20892; telephone: 301-496-1917; fax: 301-402-1501; e-mail: [dc342b@nih.gov](mailto:dc342b@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:

<http://grants.nih.gov/grants/guide/pa-files/PA-06-046.html> (SBIR) or  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-045.html> (STTR).

## **Preapplications for Interdisciplinary Research Consortium Sought**

The National Institutes of Health (NIH) encourage applications for an interdisciplinary research consortium.

This request for applications is an NIH Roadmap Initiative. The NIH Roadmap is an innovative approach to accelerate fundamental discovery and translate that knowledge into effective prevention strategies and new treatments. All NIH institutes and centers participate in Roadmap Initiatives.\*

In addition to the biological sciences, biomedical research often involves participation of other scientific disciplines, including the behavioral, quantitative, social, computational/information, engineering, and physical sciences. It is apparent, in some cases, that multidisciplinary research is not sufficient to address—in a comprehensive and effective way—challenging and complex problems in biomedical and behavioral research. Rather, interdisciplinary research may be required to tackle these more complex problems. Like multidisciplinary research, interdisciplinary research brings together different disciplines to address a particular issue. But unlike multidisciplinary research, interdisciplinary research takes bits and pieces from the contributing disciplines and integrates them in ways that produce a new conceptual framework.

This announcement is the beginning of a program that will support large interdisciplinary research consortia. The application process will have two parts: 1.) submitting a preapplication, and 2.) submitting an application for the full interdisciplinary research consortium (see <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-06-008.html>). The pre-application should identify an important biomedical problem, evaluate why previous disciplinary approaches have not solved the problem, justify why the proposed interdisciplinary approach will work, and identify methods to maintain the focus and coordination of the interdisciplinary team.

**LETTERS OF INTENT RECEIPT DATE: March 21, 2006.**

**APPLICATION RECEIPT DATE: April 18, 2006.**

For more information, potential applicants should contact Dr. Greg Farber, National Center for Research Resources (NCRR), 6701 Democracy Boulevard, Room 960, MSC 4874, Bethesda, MD 20892-4874; telephone: 301-435-0778; fax: 301-480-3659; e-mail: [farberg@mail.nih.gov](mailto:farberg@mail.nih.gov).

(end)

---

\*For a more detailed description of this RFA, please visit the NIH web site at: <http://grants.nih.gov/grants/guide/pa-files/PA-RM-06-122.html>.

For more information on the NIH Roadmap, please visit the web site at: <http://nihroadmap.nih.gov/>.

## **Application Sought to Develop Probes for Microimaging the Nervous System**

The National Institute of Neurological Disorders and Stroke (NINDS) encourages small business innovation research (SBIR) and small business technology transfer (STTR) applications to develop probes for microimaging the nervous system. This announcement is made together with 4 other components of the National Institutes of Health (NIH).\*

An emerging area of scientific opportunity is the design and use of probes to study structure and function at the molecular and subcellular levels in living cells. Approaches and tools such as labels that attach to specific peptide or nucleotide moieties, fluorescent resonance energy transfer, green fluorescent protein (and mutant color variants), and genetically engineered voltage or ion-sensitive fluorophores are making it possible to visualize not only the distribution of molecular species in cells, but also the manner in which they interact.

Examples of research topics of interest include, but are not limited to: bioengineering of small-molecule, sterically benign probes that can be genetically linked to proteins that play important roles in cell function; research, development, and engineering of probes that can report quantitative information regarding particular molecular or subcellular events or structures; research and development of probes that attach to specific sites on proteins that are observable through multiple modalities; and research and development of caged molecules that provide temporally and spatially controlled release of molecular probes.

For more information, potential applicants should contact Dr. Daofen Chen, Program Director, Systems and Cognitive Neuroscience Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2131, Bethesda, MD 20892; telephone: 301-496-1917; fax: 301-402-1501; e-mail: [dc342b@nih.gov](mailto:dc342b@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:

<http://grants.nih.gov/grants/guide/pa-files/PA-06-021.html> (SBIR) or <http://grants.nih.gov/grants/guide/pa-files/PA-06-022.html> (STTR).

## Research to Improve the Chemistry and Targeted Delivery of RNAi Molecules Sought

The National Institute of Neurological Disorders and Stroke (NINDS) invites small business innovation research (SBIR) and small business technology transfer (STTR) applications to improve the chemistry and targeted delivery of RNA interference (RNAi) molecules. This announcement is made together with 12 other components of the National Institutes of Health (NIH).\*

Gene silencing by RNAi takes advantage of an endogenous defense mechanism of protecting cells from invading viruses and damage by transposable genetic elements. In recent years, RNAi has emerged as a powerful strategy for silencing genes and has become a widely used tool due to its great simplicity and high efficiency.

Areas of research interest include, but are not limited to, studies to: develop and identify chemical modifications to improve thermal stability of dsRNA (double-stranded RNA), such as LNA (locked nucleic acids) or HNA (hexitol nucleic acids); develop nucleic acid modifications, such as 2'-fluorobases or 3'-5' phosphoramidate, leading to resistance to nuclease digestion but still allowing efficient processing by Dicer; identify chemical modifications leading to preferential strand uptake by RNA-induced silencing complexes (RISC) that will enhance specificity and reduce off-target effects; develop chemical modifications, such as 2,6-diaminopurine (DAP), that enhance base-pairing interactions between the siRNA (short interfering RNA) and targeted mRNA (messenger RNA); develop chemical modifications that will allow or regulate distribution to target tissues, such as to and across the blood-brain barrier; identify chemical modifications, such as phosphorothioate linkages that will enhance the pharmacokinetic properties of siRNA; develop improved instrumentation that will synthesize long oligonucleotides reliably and with high fidelity; and develop systems for conditional expression of siRNAs.

For more information, potential applicants should contact Dr. Danilo Tagle, Program Director, Neurogenetics Group, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2133, Bethesda, MD 20892; telephone: 301-496-5745; fax: 301-402-1501; e-mail: [dt39y@nih.gov](mailto:dt39y@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:

<http://grants.nih.gov/grants/guide/pa-files/PA-06-003.html> (SBIR) or  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-004.html> (STTR).

## Applications Encouraged for Sarcoidosis Research

The National Institute of Neurological Disorders and Stroke (NINDS) encourages grant applications for research on the cause and treatment of sarcoidosis. This announcement is made together with 8 other components of the National Institutes of Health (NIH).\*

Sarcoidosis is a human immune-mediated disorder of granulomatous inflammation. Although sarcoidosis was described originally through its skin manifestations, involvement of multiple organs and organ systems was soon recognized. Critical organ involvement occurs in the eyes, heart, and nervous system in about 15 percent, 10 percent, and 5 percent of patients, respectively.

Examples of potential research topics include, but are not limited to, studies to: investigate genetic factors that may contribute to differences in susceptibility of individuals; determine if any clinical, molecular, genetic, or other features of the skin lesions or skin presentation of sarcoidosis are predictive of serious internal organ involvement; examine why the granulomatous inflammation process in sarcoidosis attacks components of the peripheral and central nervous systems (CNS); investigate which endogenous cell types in the CNS contribute to granulomatous formation in the CNS; define innate immunity or other molecular signals from involvement of other affected organs in sarcoidosis that could predict involvement of the nervous system; define approaches for risk reduction, psychological coping, and management of complications and side effects of treatment; develop animal models for hepatic sarcoidosis that recapitulate the full spectrum of human disease for studies of etiologic mechanisms and translational studies; and identify molecular targets for novel non-cytotoxic therapies of liver sarcoidosis based on molecular studies of tissue from humans as well as through use of *in vitro* and/or animal models.

For more information, potential applicants should contact Dr. Michael Nunn, Program Director, Neural Environment Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2115, Bethesda, MD 20892; telephone: 301-496-1431; fax: 301-402-2060; e-mail: [mn52e@nih.gov](mailto:mn52e@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-123.html>.

## Research Sought on the Structural Biology of Membrane Proteins

The National Institute of Neurological Disorders and Stroke (NINDS) invites grant applications for research on the structural biology of membrane proteins. This announcement is made together with 9 other components of the National Institutes of Health (NIH).\*

Membrane proteins and their complexes play crucial roles in many cellular and physiological processes. They are essential mediators of material, information, and energy transfer between cells and their environment, compartments within cells, and compartments comprising the organ systems. Functionally normal membrane proteins are vital to health, and specific defects are associated with many known diseases.

Areas of research interest include, but are not limited to: the development of new methods to approach the problem and the application of current methods to solve specific membrane protein structures; innovative methods for production of membrane proteins in sufficient quantities for characterization and structural studies of membrane proteins; novel approaches to cloning, expression, oligomeric assembly, solubilization, stabilization, and purification of membrane proteins to advance the production of structurally and functionally intact membrane proteins suitable for structural studies; and innovative methods for structure determination, including crystallization, phasing, isotopic labeling, and collecting x-ray crystallographic, nuclear magnetic resonance (NMR), and other relevant data.

For more information, potential applicants should contact Dr. Peter Preusch, Division of Pharmacology, Physiology, and Biological Chemistry, National Institute of General Medical Sciences (NIGMS), Building 45, Room 2AS.55E, 45 Center Drive, MSC 6200, Bethesda, MD 20892; telephone: 301-594-3827; e-mail: [preuschp@nigms.nih.gov](mailto:preuschp@nigms.nih.gov); or Dr. Jean Chin, Division of Cell Biology and Biophysics, NIGMS, Building 45, Room 2AS.19A, 45 Center Drive, MSC 6200, Bethesda, MD 20892; telephone: 301-594-0828; e-mail: [chinj@nigms.nih.gov](mailto:chinj@nigms.nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:  
<http://grants.nih.gov/grants/guide/pa-files/PA-06-119.html>.



## **Applications Sought for the Exploratory/Developmental Program for Translational Research in Muscular Dystrophy**

The National Institute of Neurological Disorders and Stroke (NINDS) and the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) encourage applications for the exploratory/developmental program for translational research in muscular dystrophy.\*

The purpose of this announcement is to encourage the development and implementation of translational research programs in muscular dystrophy. Applications should focus on development of tools and resources necessary for conducting a translational research program.

Examples of possible goals of the program include, but are not limited to: identification of targets for therapeutic intervention; development of assays that permit preliminary screening of candidate therapeutics, animal models that permit further evaluation of candidate therapeutics, and tools and technologies that can be directly used for therapy development; preliminary identification of candidate therapeutics that can be evaluated through further preclinical testing; and testing of therapeutics for efficacy in cell-based or animal models of muscular dystrophy.

For more information, potential applicants should contact Dr. John Porter, Program Director, Channels, Synapses, and Circuits Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2142, Bethesda, MD 20892; telephone: 301-496-1917; fax: 301-402-1501; e-mail: [jp477n@nih.gov](mailto:jp477n@nih.gov).

(end)

---

\*For a more detailed description of this announcement, please visit the NIH web site at: <http://grants.nih.gov/grants/guide/pa-files/PAR-06-043.html>.

## **Translational Research in Muscular Dystrophy Encouraged**

The National Institute of Neurological Disorders and Stroke (NINDS) and the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) encourage grant applications for translational research projects in muscular dystrophy.\*

Several emerging pathways to treat muscular dystrophy show promise, ranging from palliative therapies that can markedly delay onset or progression of the disease to genetic or stem cell approaches that may reverse or eliminate the condition.

Potential research areas of interest include, but are not limited to, studies to: develop drug-based therapies to protect muscle mass; develop strategies to enhance existing muscle repair mechanisms; optimize cell-based muscle replacement strategies; develop, test, and improve strategies for gene replacement therapy; develop and test genetic modification therapies to bypass inherited mutations; and develop combination therapies that rely upon more than one of the strategies listed above in order to produce a more effective treatment than may be possible with any single strategy.

For more information, potential applicants should contact Dr. John Porter, Program Director, Channels, Synapses, and Circuits Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2142, Bethesda, MD 20892; telephone: 301-496-1917; fax: 301-402-1501; e-mail: [jp477n@nih.gov](mailto:jp477n@nih.gov).

(end)

---

\*For a more detailed description of this announcement, please visit the NIH web site at: <http://grants.nih.gov/grants/guide/pa-files/PAR-06-044.html>.

## **Applications for Autism Centers of Excellence Encouraged**

The National Institute of Neurological Disorders and Stroke (NINDS) encourages applications for autism centers of excellence. This announcement is made together with 4 other components of the National Institutes of Health (NIH) and is supported by 2 award mechanisms: the traditional research project grant (R01) award and the NIH specialized centers of research (P50) award.\*

Autism spectrum disorders (ASD) are complex neurodevelopmental disorders with early childhood onset. ASD prevalence may be increasing and the disorders are more common than previously thought. These disorders, for which there is presently no cure and only limited treatments, generally have lifelong effects.

Examples of potential research projects include, but are not limited to, studies to: identify individual characteristics that predict response to behavioral, pharmacological, and other treatments; identify environmental factors that contribute to the development of autism and their associated developmental windows; identify the biological and/or behavioral markers to develop indices of risk for the development of autism in infants; find intervention methods for infants and toddlers developed to lower the age for which there are efficacious interventions; identify moderators and effective ingredients of early intervention treatments; examine subsequent pregnancies and infant siblings of children with autism to identify risk factors, broader phenotype, and early characterization of autism; explore innovative and newly developed intervention strategies to improve outcomes in school and community settings throughout the lifespan, including transitions; develop efficacious drug treatments that target core symptoms of autism; characterize the neuropathology of autism to identify impaired brain structures and functions; and identify susceptibility genes and animal models of autism for further study of phenotypic characteristics of autism.

**LETTERS OF INTENT RECEIPT DATE: July 11, 2006.**

**APPLICATION RECEIPT DATE: August 11, 2006.**

For more information, potential applicants should contact Dr. Alice Kau, Mental Retardation and Developmental Disabilities Branch, Center for Developmental Biology and Perinatal Medicine, National Institute of Child Health and Human Development (NICHD), 6100 Executive Boulevard, Room 4B09F, Bethesda, MD 20892; telephone: 301-496-1383; fax: 301-496-3791; e-mail: [kaua@mail.nih.gov](mailto:kaua@mail.nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this announcement, please visit the NIH web site at:

<http://grants2.nih.gov/grants/guide/rfa-files/RFA-HD-06-004.html> (R01) or  
<http://grants2.nih.gov/grants/guide/rfa-files/RFA-HD-06-004.html> (P50).

## **Applications for CounterACT Research Centers of Excellence Requested**

The National Institute of Neurological Disorders and Stroke (NINDS) requests grant applications for countermeasures against chemical threats (CounterACT) research centers of excellence. This announcement is made together with 5 other components of the National Institutes of Health (NIH).\*

The increased risk of a terrorist attack in the United States involving chemical agents has created new challenges for many departments and agencies across the federal government. Within the Department of Health and Human Services (DHHS), the NIH is taking a leadership role in developing new and improved medical countermeasures designed to prevent, diagnose, and treat conditions caused by potential and existing chemical agents of terrorism.

Examples of research areas of interest include, but are not limited to: therapies based on acute toxicity of the chemical threat agent; alternate routes of administration for new or approved therapies that are safe, effective, and easy to administer during a mass casualty scenario; improved rapid diagnostic techniques/technologies used for differential diagnosis, triage, detection of subclinical exposures, prognosis, and prediction of tissue damage; identification of biomarkers (genomic, proteomic, metabonomic) of exposure and disease progression for individual chemicals or classes of chemicals with similar signatures; identification of segments of the general population that are more sensitive to chemical threats; safe and effective therapies and diagnostic techniques for pediatric and elderly segments of the civilian population or for those individuals with pre-existing medical conditions; and short- and long-term pathophysiology from acute exposures to threat agents for developing medical countermeasures.

**LETTERS OF INTENT RECEIPT DATE: March 10, 2006.**

**APPLICATION RECEIPT DATE: April 11, 2006.**

For more information, potential applicants should contact Dr. David Jett, Program Director, Technology Development Group, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2177, Bethesda, MD 20892; telephone: 301-496-6035; fax: 301-402-1501; e-mail: [dj140o@nih.gov](mailto:dj140o@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this request for applications, please visit the NIH web site at:  
<http://grants2.nih.gov/grants/guide/rfa-files/RFA-NS-06-005.html>.

## **Applications for CounterACT Research Projects Requested**

The National Institute of Neurological Disorders and Stroke (NINDS) requests grant applications for countermeasures against chemical threats (CounterACT) research projects. This announcement is made together with 5 other components of the National Institutes of Health (NIH).\*

The increased risk of a terrorist attack in the United States involving chemical agents has created new challenges for many departments and agencies across the federal government. The purpose of this announcement is to support cooperative agreement (U01) research projects to develop safe and effective medical countermeasures against chemical threats. Chemical threat agents are toxic chemicals that could be used in a terrorist attack against civilians, or chemicals that could be released at toxic levels by accident or natural disaster.

Areas of research interest include, but are not limited to: therapies based on acute toxicity of the chemical threat agent, e.g., development of new and/or improved anticonvulsants, neuroprotectants, new approaches to counteract pulmonary edema, relevant anti-inflammatory drugs, surfactants, or the development of better skin and eye protectants; therapies based on mechanism of action of the threat agent, e.g., reactivation/protection of acetylcholinesterase, or preservation of mitochondrial respiration; alternate formulations of existing therapeutics that possess physical and chemical characteristics that allow them to be stockpiled, e.g., longer shelf lives; improved rapid diagnostic techniques/technologies used for differential diagnosis, triage, detection of subclinical exposures, prognosis, and prediction of tissue damage; identification of biomarkers (genomic, proteomic, metabonomic) of exposure and disease progression for individual chemicals or classes of chemicals with similar signatures; and safe and effective therapies and diagnostic techniques for pediatric and elderly segments of the civilian population or for those individuals with pre-existing medical conditions.

**LETTERS OF INTENT RECEIPT DATE: March 10, 2006.**

**APPLICATION RECEIPT DATE: April 11, 2006.**

For more information, potential applicants should contact Dr. David Jett, Program Director, Technology Development Group, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2177, Bethesda, MD 20892; telephone: 301-496-6035; fax: 301-402-1501; e-mail: [dj140o@nih.gov](mailto:dj140o@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this request for applications, please visit the NIH web site at:  
<http://grants2.nih.gov/grants/guide/rfa-files/RFA-NS-06-004.html>.

## **Applications for CounterACT Therapeutics Development Requested**

The National Institute of Neurological Disorders and Stroke (NINDS) requests small business innovation research (SBIR) applications for countermeasures against chemical threats (CounterACT) therapeutics development. This announcement is made together with 5 other components of the National Institutes of Health (NIH).\*

The increased risk of a terrorist attack in the United States involving chemical agents has created new challenges for many departments and agencies across the federal government. The purpose of this research program is to support the development of new and improved therapeutics to prevent or mitigate the toxic effects from exposure to chemical threats. Chemical threats are toxic chemicals that could be used in a terrorist attack against civilians, or chemicals that could be released at toxic levels by accident or natural disaster.

Areas of research interest include, but are not limited to: therapies based on acute toxicity of the chemical threat agent; therapies based on sequestration or inactivation of the chemical agent *in vivo*, such as stoichiometric scavengers or cyanide sulfur donors; alternate routes of administration for new or approved therapies that are safe, effective, and easy to administer during a mass casualty scenario; toxicokinetic and route of administration studies with threat agents for the purpose of developing better medical countermeasures; re-evaluation of supportive measures and other medical approaches to delay mortality and morbidity until transportation to medical facilities; identification of segments of the general population that are more sensitive to chemical threats; safe and effective therapies for pediatric and elderly segments of the civilian population or for those individuals with pre-existing medical conditions; and medical prophylactic and protective measures appropriate for first responders or other personnel who must enter a contaminated site.

**LETTERS OF INTENT RECEIPT DATE: March 10, 2006.**

**APPLICATION RECEIPT DATE: April 11, 2006.**

For more information, potential applicants should contact Dr. David Jett, Program Director, Technology Development Group, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2177, Bethesda, MD 20892; telephone: 301-496-6035; fax: 301-402-1501; e-mail: [dj140o@nih.gov](mailto:dj140o@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this request for applications, please visit the NIH web site at:  
<http://grants2.nih.gov/grants/guide/rfa-files/RFA-NS-06-006.html>.

## **Applications Requested to Develop Diagnostic Technologies for Chemical Threat Exposure**

The National Institute of Neurological Disorders and Stroke (NINDS) requests small business innovation research (SBIR) applications to research and develop diagnostics for exposure to chemical threats. This announcement is made together with 5 other components of the National Institutes of Health (NIH).\*

Chemical threat agents are toxic chemicals that could be used in a terrorist attack against civilians, or chemicals that could be released at toxic levels by accident or natural disaster. The purpose of this research program is to develop rapid and portable diagnostic tools suitable for use by emergency care providers in order to guide medical countermeasures and treatment.

Examples of research topics of interest include, but are not limited to, studies to develop: portable, inexpensive electroencephalogram (EEG) systems that can be rapidly deployed and configured for detection of seizures in civilian individuals under mass casualty conditions; arrays of a minimal, yet functional, number of adhesive surface electrodes suitable for a range of pediatric to adult civilian populations; EEG artifact suppression technologies that allow robust operation of monitors in field and clinical settings; a rapid field diagnostic test that distinguishes cyanide from nerve agent exposure; rapid, sensitive, and specific diagnostic assays utilizing blood, saliva, or urine to detect chemical agents and/or cyanide; rapid, sensitive, and specific diagnostic assays utilizing blood, saliva, or urine to detect markers or degradation products from chemical agent and/or cyanide exposure; portable and inexpensive mass spectroscopy instruments for detection in blood, saliva, or urine, of chemical threat exposure or corresponding degradation products; micro-total analytical system “lab-on-a-chip” technologies for detection of chemical threat exposure in biological samples; and simplified sample preparation methodologies that preserve key analytes to enable rapid field analysis or later validation in clinical settings.

**LETTERS OF INTENT RECEIPT DATE: March 10, 2006.**

**APPLICATION RECEIPT DATE: April 11, 2006.**

For more information, potential applicants should contact Dr. Joseph Pancrazio, Program Director, Repair and Plasticity Cluster, NINDS, Neuroscience Center, 6001 Executive Boulevard, Room 2177, Bethesda, MD 20892; telephone: 301-496-1447; fax: 301-480-1080; e-mail: [jp439m@nih.gov](mailto:jp439m@nih.gov).

(end)

---

\*For a full list of supporting NIH components and a more detailed description of this request for applications, please visit the NIH web site at:  
<http://grants2.nih.gov/grants/guide/rfa-files/RFA-NS-06-007.html>.



## **Applications Sought for Interdisciplinary Research Consortium**

The National Institutes of Health (NIH) encourage applications for interdisciplinary research consortium.

This request for applications is an NIH Roadmap Initiative. The NIH Roadmap is an innovative approach to accelerate fundamental discovery and translate that knowledge into effective prevention strategies and new treatments. All NIH institutes and centers participate in Roadmap Initiatives.\*

In addition to the biological sciences, biomedical research often involves participation by other scientific disciplines, including the behavioral, quantitative, social, computational/information, engineering, and physical sciences. Distinct disciplinary perspectives represent significant sources of strength to the overall research endeavor because each discipline has its own intellectual history, experimental and analytical approaches, and theoretical context that produce a unique way of thinking about a problem. Nevertheless, as scientific capabilities move forward, increasingly sophisticated questions arise, and these often require a blending of perspectives from multiple disciplines.

The purpose of this announcement is to support interdisciplinary approaches to solve significant and complex biomedical problems, particularly those that have been resistant to traditional approaches. Applications for this announcement must hold the promise of leading to new research approaches to improving human health. Interdisciplinary consortia are expected to identify an important biomedically relevant problem, evaluate why previous approaches have not worked, justify why the proposed interdisciplinary approach will work, identify the methods that will keep the interdisciplinary team focused and coordinated, and propose a timeline.

**LETTERS OF INTENT RECEIPT DATE: Not Applicable.**

**APPLICATION RECEIPT DATE: December 19, 2006.**

For more information, potential applicants should contact Dr. Greg Farber, National Center for Research Resources (NCRR), 6701 Democracy Boulevard, Room 960, MSC 4874, Bethesda, MD 20892-4874; telephone: 301-435-0778; fax: 301-480-3659; e-mail: [farberg@mail.nih.gov](mailto:farberg@mail.nih.gov); or Dr. Michael Huerta, National Institute of Mental Health (NIMH), 6001 Executive Boulevard, Room 7202, MSC 9645, Rockville, MD 20892-09645; telephone: 301-443-3563; fax: 301-443-1731; e-mail: [mhuert1@mail.nih.gov](mailto:mhuert1@mail.nih.gov).

(end)

---

\*For a more detailed description of this RFA, please visit the NIH web site at: <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-06-008.html>.

For more information on the NIH Roadmap, please visit the web site at: <http://nihroadmap.nih.gov/>.

## **Applications Requested for Nanomedicine Development Centers**

The National Institutes of Health (NIH) requests applications for nanomedicine development centers.

This request for applications is an NIH Roadmap Initiative. The NIH Roadmap is an innovative approach to accelerate fundamental discovery and translate that knowledge into effective prevention strategies and new treatments. All NIH institutes and centers participate in Roadmap Initiatives.\*

Nanomedicine refers to highly specific medical intervention at the molecular scale for curing disease and/or repairing tissue. Nanomedicine is 1 of 9 major initiatives included in the NIH Roadmap. Because nanomedicine is an emerging biomedical discipline, NIH engaged the biomedical research community to help define and develop concepts and a framework to stimulate work in this field. A 2-year planning process resulted in the establishment of a collaborative national network of nanomedicine development centers (NDC). Each is unique in its goals, expertise, and approaches, and all are committed to working in a collaborative effort to address the vision of this initiative and jumpstart the field of nanomedicine.

The primary goals of this initiative are to characterize quantitatively the nanoscale components of the cell and precisely control and manipulate these molecules and supramolecular assemblies in living cells to improve human health, and to stimulate development of radically new technologies that might provide novel strategies and new insights for cell biological studies of intracellular molecular activity. Examples of topics of potential research interest include, but are not limited to, protein-protein interactions, intracellular transport, and biomolecular dynamics.

For more information, potential applicants should contact Dr. Richard Fisher, National Eye Institute (NEI), 5635 Fishers Lane MSC 9300, Bethesda, MD 20892; telephone: 301-451-2020; fax: 301-402-0528; e-mail: [fisher@mail.nih.gov](mailto:fisher@mail.nih.gov).

(end)

---

\*For a more detailed description of this RFA, please visit the NIH web site at: <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-06-007.html>.

For more information on the NIH Roadmap, please visit the web site at: <http://nihroadmap.nih.gov/>.

## **Applications Sought for Pilot-Scale Libraries for High-Throughput Screening**

The National Institutes of Health (NIH) requests applications for pilot-scale libraries for high-throughput screening.

This request for applications is an NIH Roadmap Initiative. The NIH Roadmap is an innovative approach to accelerate fundamental discovery and translate that knowledge into effective prevention strategies and new treatments. All NIH institutes and centers participate in Roadmap Initiatives.\*

The last decade has witnessed major breakthroughs in the identification of genes, gene products, metabolic pathways, and signaling pathways, as well as progress in miniaturization and robotics, enabling the development of high-throughput, highly specific, mechanism-based biological assays. The new assays have, in turn, revolutionized the discovery of small molecules with powerful physiological effects. While high-throughput screening (HTS) of small-molecule libraries is widespread in the pharmaceutical industry, the goal of the Molecular Libraries Roadmap Initiative is to facilitate the use of HTS and chemical libraries within the academic and nonprofit community.

The goal of this initiative is to solicit applications to generate chemical libraries to increase the diversity and the uniqueness of the collection in the Molecular Libraries Small Molecule Repository (MLSMR). The pilot-scale libraries generated under this announcement will be submitted to the MLSMR and then to the Molecular Libraries Screening Center Network (MLSCN) for HTS evaluation.

**LETTERS OF INTENT RECEIPT DATE: September 1, 2006.**

**APPLICATION RECEIPT DATE: September 22, 2006.**

For more information, potential applicants should contact Dr. John Schwab, Division of Pharmacology, Physiology, and Biological Chemistry, National Institute of General Medical Sciences (NIGMS), 45 Center Drive, Room 2As.43A MSC 6200, Bethesda, MD 20892-6200; telephone: 301-594-3827; fax: 301-480-2802; e-mail: [schwabj@nigms.nih.gov](mailto:schwabj@nigms.nih.gov).

(end)

---

\*For a more detailed description of this RFA, please visit the NIH web site at: <http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-06-003.html>.

For more information on the NIH Roadmap, please visit the web site at: <http://nihroadmap.nih.gov/>.

## **Individuals with Tourette Syndrome Sought for Study**

Scientists at the National Institute of Neurological Disorders and Stroke (NINDS) seek persons with Tourette syndrome (TS) for a research study of sensory symptoms such as clothing discomfort and premonitory urge.

TS is a neurological disorder that causes people to have uncontrolled movements, called “tics.” A tic can also be vocal, like a cough or a bark, or even as severe as a string of bad words. In either case, before a person with TS actually has a tic, they often feel the urge to tic. This is similar to feeling an urge to scratch an itch. Sometimes people with TS experience other sensations, such as a tickling feeling on the skin or a discomfort with certain clothing items. In this study, NINDS scientists will observe brain activity during the time of these sensations and how it may differ in people who have TS and people who do not have TS.

Participants in the study will undergo a non-invasive procedure called a magnetoencephalogram (MEG) which records the magnetic field changes produced by brain activity.

Eligible persons should have a diagnosis of TS and be between the ages of 14 and 65. Persons who have metal objects implanted in their bodies or have been diagnosed with certain neuropsychiatric disorders other than TS, or who are pregnant or taking certain medications, may not be eligible.

The one-day outpatient study will take place at the National Institutes of Health (NIH) Clinical Center, and require 5.5 hours of time. There is no cost for participation or any tests associated with the research. Travel compensation will be provided for participants.

For more information, contact Rachel Wurzman, Human Motor Control Section, NINDS, Building 10, Room 5N240, 10 Center Drive MSC 1440, Bethesda, MD 20892-1440; telephone: 301-402-3493; fax: 301-480-2909. Please refer to study number 05-N-0230.

(end)